

Claim Amendments:

Claim 1 (Currently amended): A method of making a carbon foam material comprising

providing a carbon foam precursor,

heating said carbon foam precursor to remove a portion of the volatiles therefrom and create a partially devolatilized precursor extract,

effecting said heating in an inert gas environment in a sealed vessel,

cooling said devolatilized coal precursor extract,

converting said devolatilized extract into a powder,

introducing said powder into a sealed vessel,

foaming said devolatilized coal precursor extract in said vessel by heating it at a pressure of less than about 20 atmospheres, and

cooling said foamed material.

Claim 2 (Original): The method of claim 1 including effecting said foaming in an inert gas environment.

Claim 3 (Original): The method of claim 1 including effecting said partial devolatilization under an inert gas environment.

Claim 4 (Original): The method of claim 1 including effecting said foaming under an inert gas environment.

Claim 5 (Original): The method of claim 1 including effecting said foaming at a pressure of about 0.5 to 1.5 atmospheres.

Claim 6 (Currently amended) The method of claim 5 including effecting said foaming at a temperature of about 330°C to 600°C for about 1 minute to 6 hours.

Claim 7 (Currently amended): The method of claim 6 including effecting said heating to devolatilize said carbon foam precursor to a temperature of about 100°C to 720°C.

Claim 8 (Original): The method of claim 6 including creating said devolatilized carbon foam precursor powder with a size of about 10 to 325 mesh.

Claim 9 (Original): The method of claim 1 including effecting by said partial devolatilization of said carbon foam precursor alteration of the fluid nature of the matrix of said heated carbon foam precursor.

Claim 10 (Original): The method of claim 1 including employing bituminous coal as said carbon foam precursor.

Claim 11 (Original): The method of claim 1 including employing coal extract as said carbon foam precursor.

Claim 12 (Original): The method of claim 11 including employing a material selected from the group consisting of de-ashed coal extract and un-ashed coal extract as said carbon foam precursor.

Claim 13 (Original): The method of claim 1 including employing mesophase pitch as said carbon foam precursor.

Claim 14 (Original): The method of claim 1 including employing petroleum based pitch as said carbon foam precursor.

Claim 15 (Original): The method of claim 1 including effecting by said partial devolatilization removal of a portion of the internal blowing agent from said carbon foam precursor.

Claim 16 (Original): The method of claim 1 including after said partial devolatilization, but before said foaming, storing said devolatilized powder.

Claim 17 (Original): The method of claim 1 including after said devolatilizing, but before said foaming, oxidizing said powder.

Claim 18 (Original): The method of claim 3 including employing stagnant inert gas as said inert gas environment.

Claim 19 (Original): The method of claim 3 including employing flowing inert gas as said inert gas environment.

Claim 20 (Original): The method of claim 4 including employing stagnant inert gas as said inert gas environment.

Claim 21 (Original): The method of claim 4 including employing flowing inert gas as said inert gas environment.

Claim 22 (Currently amended): A method of making a carbon foam material comprising
providing a carbon foam precursor,
creating a powder of said precursor,
heating said powdered carbon foam precursor at a pressure of about 0.5 to 1.5 atmospheres at a temperature of about 20°C to 500°C for about 1 minute to 72 hours to effect oxidation thereof,

cooling said oxidized carbon foam precursor powder to room temperature,

shaping said oxidized carbon foam precursor powder by placing said oxidized carbon foam precursor powder in a mold,

heating said oxidized carbon foam precursor powder in said mold in an inert gas environment at a pressure less than 20 atmospheres to a temperature of about 330°C to 600°C to foam said powdered precursor within said mold, and

cooling said foam to room temperatures temperature.

Claim 23 (Cancelled).

Claim 24 (Currently amended): The method of claim 22 including
A method of making a carbon foam material comprising
providing a carbon foam precursor,
creating a powder of said precursor,
heating said powdered carbon foam precursor at a pressure of
about 0.5 to 1.5 atmospheres at a temperature of about 20°C to 500°C for about 1
minute to 72 hours to effect oxidation thereof,

heating said oxidized carbon foam precursor in an inert gas environment at a pressure less than 20 atmospheres to a temperature of about 330°C to 600°C to foam said powdered precursor,

cooling said foam to room temperature, and

employing bituminous coal as said carbon foam precursor.

Claim 25 (Original): The method of claim 22 including

employing coal extract as said carbon foam precursor.

Claim 26 (Original): The method of claim 22 including

employing a material selected from the group consisting of de-ashed-coal-extract and un-ashed-coal-extract-as-said-carbon-foam-precursor.

Claim 27 (Original): The method of claim 22 including

employing hydrogenated coal extract as said carbon foam precursor.

Claim 28 (Cancelled).

Claim 29 (Original): The method of claim 22 including

employing mesophase pitch as said carbon foam precursor.

Claim 30 (Original): The method of claim 22 including

employing petroleum based pitch as said carbon foam precursor.

Claim 31 (Original): The method of claim 22 including effecting said carbon foam precursor oxidation in the presence of at least one material selected from the group consisting of water and steam.

Claim 32 (Original): The method of claim 22 including

devolatilizing said precursor prior to said oxidation.

Claim 33 (Original): The method of claim 22 including

creating said precursor powder in the range of about 10 to 325 mesh.

Claim 34 (Currently amended): The method of claim 22 including

A method of making a carbon foam material comprising

providing a carbon foam precursor,

creating a powder of said precursor,

heating said powdered carbon foam precursor at a pressure of about 0.5 to 1.5 atmospheres at a temperature of about 20°C to 500°C for about 1 minute to 72 hours to effect oxidation thereof,

heating said oxidized carbon foam precursor in an inert gas environment at a pressure less than 20 atmospheres to a temperature of about 330°C to 600°C to foam said powdered precursor,

cooling said foam to room temperature, and
after said oxidation, but prior to said foaming, storing said oxidized precursor.

Claim 35 (Original): The method of claim 22 including
effecting said foaming at a pressure of about 0.5 to 1.5 atmospheres.